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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,775	10/20/2003	Han-Ting Chang	2002-061R1	4543

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EXAMINER

CHEUNG, WILLIAM K

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,775

Applicant(s)

CHANG ET AL.

Examiner

William K. Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11, 20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-9, 12-14 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 4-6, 15, 16 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election with traverse of Group I invention, claims 1-9, 12-19, and 22, is acknowledged. The traversal is on the ground(s) that it would not be any additional burden to the examiner in view of the common subject matter. This is not found persuasive because applicants fail to recognize that the Group II product invention can be prepared by methods other than the method of Group I. Therefore, the additional search of Group II invention would mean additional burden to the examiner.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 7-9, 12-14, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 6,767,968 B1).

*The invention of claims 1-3, 7-9 relates to a **method of preparing a block copolymer** having at least one **hydrophilic block** and one **olefinic block** comprising polymerizing a **liquid hydrophilic monomer** under polymerization conditions in the presence of a **dithio-containing control agent** to create said at least one **hydrophilic block** and subsequently **reacting said at least one hydrophilic block with an olefin monomer** capable of free radical polymerization under polymerization conditions to form said at least one olefinic block, wherein said **block copolymer can change the surface tension of an olefinic substrate by an amount of at least 10 mN/m**.*

*The invention of claims 12-14, 17-19 relates to a **method of preparing a block copolymer** having at least one **hydrophilic block** and one **olefinic block** comprising polymerizing an olefinic monomer under free radical polymerization conditions in the presence of a **dithio-containing control agent** to create said at least one olefinic block and subsequently **reacting said at least one olefinic block with a hydrophilic monomer** capable of free radical polymerization under polymerization conditions to form said at least one hydrophilic block.*

Liu et al. (col. 13-14) disclose method of preparing a block copolymer in the presence of dithio-controlling agent. Liu et al. (col. 23-24, claim 1) disclose that the block copolymer prepared from acrylic monomers and vinyl acetate. In view of the substantially identical composition being claimed and disclosed in Liu et al., the examiner has a reasonable basis to believe that the claimed hydrophilic and hydrophobic blocks of the copolymer, and the block copolymer can cause a LDPE substrate to have a classification of at least 3B on the cross cut adhesion test are inherently possessed in Liu et al.

The difference between the invention of Liu et al. and the instant invention is that Liu et al. do not contain all the claimed limitations in a single embodiment.

However, because Liu et al. explicitly disclose the type of monomers and comonomers being claimed in the block copolymers, motivated by the expectation of success for preparing the block copolymers taught by Liu et al., it would have been obvious to one of ordinary skill in art to assemble all the explicit teachings in Liu et al. to obtain the invention of claims 1-3, 7-9, 12-14, 17-19.

***Allowable Subject Matter***

4. Claims 4-6, 15-16, 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Liu et al. are silent on a method of preparing a block copolymer comprising ethylene, butadiene, or a hydrogenation-processing step.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung

Primary Examiner

April 8, 2005

**WILLIAM K. CHEUNG  
PRIMARY EXAMINER**